

# For 4 Montgomery Students, a Summer of Learning

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For four weeks of their summer vacation, four rising seniors from Montgomery High School, David Fan, Andrew Jiang, Akshay Kadhiresan and Lucy Zhang were doing anything but sitting on the beach. These students, as participants in the prestigious Governor's School of Science and Governor's School of Engineering and Technology summer programs, spent much of their time hard at work in a number of activities, from programming robots, to taking classes in computational biology and quantum mechanics, to working on novel research projects, all in a coordinated effort by the State of New Jersey to motivate talented high school students to pursue careers in the fields of science and engineering.

"Essentially, Governor's School is about taking people who love science, really expanding their perspective and introducing them to things people normally wouldn't be able to study in high school," commented one participant from Montgomery.

The Governor's School programs accept students on basis of a number of criteria, including standardized test scores, involvement in science and technology activities and competitions as well as recommendation by school administrators. Each high school in New Jersey can nominate 1-3 students depending on class size, and out of these thousands of nominees, only about 80 were chosen for each Governor's School.

When asked about the student culture present at the Governor's School of Science, participant Akshay Kadhiresan commented that "being around so many other students with interests similar to mine pushed me to learn more about the ideas that I hope to put into practice, but even more, the research projects and laboratory work have shown me the rigor and perseverance that scientists display every day."

Indeed, for most of the participants, the projects, classes and assignments given proved both thought-provoking and pleasantly rewarding. Students from both schools accomplished feats that researchers and engineers in the real world perform regularly: writing research papers, presenting at conferences, and otherwise participating in discussion within the scientific community. Students were grouped into teams of 4-10, in which they worked together to research an assigned topic. One such project at the Engineering School was the Chem-E-Car, in which students designed and built a miniature electric car powered by chemical reactions.

As team member David Fan, a rising senior at Montgomery High School, explains, "The challenge was that we could only use household products, which are inherently impure and non-ideal materials to work with. But this simulated a real world situation in which you have to use only what's available to solve a problem, and this is engineering at its heart. By using cheap and readily accessible materials, we created a cost-effective and efficient car that successfully ran."

Yet, the activities at the summer programs were only the tip of the Governor's School experience, as one student explained. "The best part about Governor's School was getting to meet a bunch of other highly passionate kids who really enjoyed learning and had big aspirations for the future. People like that are hard to come upon and being in a program where everyone is like that is amazing." When asked whether anyone should apply for Governor's School or seek out similar experiences during high school, all four Montgomery students responded with a resounding "Yes. Absolutely."